WEST

Freeform Search

Database:
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term: L21 and l19

Display: 10 **Documents in Display Format:** CIT **Starting with Number** 1

Generate: ○ Hit List ◉ Hit Count ○ Side by Side ○ Image

Search | Clear | Help | Logout | Interrupt

Main Menu | Show S Numbers | Edit S Numbers | Preferences | Cases

Search History

DATE: Tuesday, November 26, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=TDBD; PLUR=YES; OP=OR		
L22	L21 and l19	5	L22
L21	L20 and l18	1130	L21
L20	L16 and l17	6404	L20
L19	historical with (data or information)	42	L19
L18	assum$7 or predict$3	8913	L18
L17	line$1 or cable$1 or loop$1	30647	L17
L16	test$3 or measur$8	14583	L16
	DB=JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L15	L14 and l9	2	L15
L14	L13 and l12	2080	L14
L13	l10 and l11	171186	L13
L12	assum$7 or predict$3	93508	L12
L11	test$3 or measur$8	1356995	L11
L10	line$1 or cable$1 or loop$1	1929999	L10
L9	historical with (data or information)	1002	L9
	DB=USPT; PLUR=YES; OP=OR		
L8	l7 and (379/$.ccls. or 370/$.ccls. or 324/$.ccls.)	11	L8
L7	L6 same l2	32	L7
L6	L5 same l3	201	L6
L5	l1 same l4	300324	L5
L4	line$1 or cable$1 or loop$1	2006229	L4
L3	historical with (data or information)	5667	L3
L2	assum$7 or predict$3	685896	L2
L1	test$3 or measur$8	1300550	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Tuesday, November 26, 2002

Set Name side by side	**Query**	**Hit Count**	**Set Name** result set
DB=USPT; PLUR=YES; OP=OR			
L2	L1 same ($1dsl)	2	L2
L1	(assum$8 or predict$3) same ((prox$3 or neighb$8 or adjacent) with (line or loop))	4576	L1

END OF SEARCH HISTORY

L Number	Hits	Search Text	DB	Time stamp
1	194574	(perform$3) with (test$3 or determin$8)	USPAT	2002/11/26 11:22
2	5388	(tone or call) with progress$3	USPAT	2002/11/26 11:23
3	140	((perform$3) with (test$3 or determin$8)) same ((tone or call) with progress$3)	USPAT	2002/11/26 11:23
4	0	(((perform$3) with (test$3 or determin$8)) same ((tone or call) with progress$3)) same rule$1	USPAT	2002/11/26 11:23
5	36	(((perform$3) with (test$3 or determin$8)) same ((tone or call) with progress$3)) and rule$1	USPAT	2002/11/26 11:25
6	13	(((perform$3) with (test$3 or determin$8)) same ((tone or call) with progress$3)) and (379/372-386.ccls.)	USPAT	2002/11/26 11:25

L Number	Hits	Search Text	DB	Time stamp
1	1371578	test$3 or measur$8	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:19
2	1893329	line or cable or loop	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:36
3	43920	(adjacent or neighb$8 or prox$3) with (line or cable or loop)	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:40
4	102421	assum$7 or predict$3	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:42
5	2527	(test$3 or measur$8) and ((adjacent or neighb$8 or prox$3) with (line or cable or loop))	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:22
6	58	((test$3 or measur$8) and ((adjacent or neighb$8 or prox$3) with (line or cable or loop))) and (assum$7 or predict$3)	EPO; JPO; DERWENT; IBM_TDB	2002/11/26 09:34
7	1973758	line or cable or loop	USPAT	2002/11/26 09:37
8	167306	(adjacent or neighb$8 or prox$3) with (line or cable or loop)	USPAT	2002/11/26 09:41
9	685896	assum$7 or predict$3	USPAT	2002/11/26 09:43
10	4871	(assum$7 or predict$3) same ((adjacent or neighb$8 or prox$3) with (line or cable or loop))	USPAT	2002/11/26 09:43
11	30	((assum$7 or predict$3) same ((adjacent or neighb$8 or prox$3) with (line or cable or loop))) and 379/$.ccls.	USPAT	2002/11/26 09:48
12	4841	((assum$7 or predict$3) same ((adjacent or neighb$8 or prox$3) with (line or cable or loop))) not 379/$.ccls.	USPAT	2002/11/26 09:48
13	82	(((assum$7 or predict$3) same ((adjacent or neighb$8 or prox$3) with (line or cable or loop))) not 379/$.ccls.) and 370/$.ccls.	USPAT	2002/11/26 09:56
14	150970	data with (rate or speed)	USPAT	2002/11/26 09:59
15	792	((adjacent or neighb$8 or prox$3) with (line or cable or loop)) same (data with (rate or speed))	USPAT	2002/11/26 10:00
16	46	(assum$7 or predict$3) same (((adjacent or neighb$8 or prox$3) with (line or cable or loop)) same (data with (rate or speed)))	USPAT	2002/11/26 10:01

L13 ANSWER 1 OF 8 INSPEC COPYRIGHT 2002 IEE

AB A tutorial on the physical process by which power lines induce interference in **neighbouring** buried **communications cables** is presented. The discussion is based on the interpretation of existing models and a plausibility argument for the current distribution in the earth below a transmission line. This leads to a simple model for inductive coupling, which can be used to **predict** the inductive influence of lines without recourse to numerical evaluation. A new **measure** of the inductive influence of transmission lines is proposed, which is based on a large separation approximation to the mutual impedance and includes the effect of conductor height, earth resistivity and current sequence.

CT ELECTROMAGNETIC INDUCTION; ELECTROMAGNETIC INTERFERENCE; POWER TRANSMISSION LINES; **TELECOMMUNICATION CABLES**

ST inductive interference; power systems; communications circuits; power lines; **buried communications cables**; transmission lines; mutual impedance; conductor height; earth resistivity; current sequence

AN 1992:4041375 INSPEC DN B9201-8130-014

TI Physical interpretation of inductive interference of power systems on communications circuits.

AU Cameron, G.R. (Telecom Corp. of New Zealand Ltd., Christchurch, New Zealand); Bodger, P.S.

SO International Journal of Electrical Power & Energy Systems (June 1991) vol.13, no.3, p.153-9. 11 refs.
Price: CCCC 0142-0615/91/030153-07$3.00
CODEN: IEPSDC ISSN: 0142-0615

DT Journal

TC Theoretical

CY United Kingdom

LA English

AB A tutorial on the physical process by which power lines induce interference in **neighbouring** buried **communications cables** is presented. The discussion is based on the interpretation of existing models and a plausibility argument for the current distribution in the earth below a transmission line. This leads to a simple model for inductive coupling, which can be used to **predict** the inductive influence of lines without recourse to numerical evaluation. A new **measure** of the inductive influence of transmission lines is proposed, which is based on a large separation approximation to the mutual impedance and includes the effect of conductor height, earth resistivity and current sequence.

CC B8130 Power transmission lines and cables; B5140 Electromagnetic induction; B6240 Transmission line links and equipment; B5230 Electromagnetic compatibility and interference

CT ELECTROMAGNETIC INDUCTION; ELECTROMAGNETIC INTERFERENCE; POWER TRANSMISSION LINES; **TELECOMMUNICATION CABLES**

ST inductive interference; power systems; communications circuits; power lines; **buried communications cables**; transmission lines; mutual impedance; conductor height; earth resistivity; current sequence

L13 ANSWER 2 OF 8 INSPEC COPYRIGHT 2002 IEE

AB A fatigue model which **predicts** cycles-to-failure for helically armored cables subjected to fluctuating axial tension is proposed. Electrical-optical **communication cables**, power cables, and bridge and track stands normally derive structural strength from two or more layers of round steel wires contrahelically laid around a cylindrical core. In cases where wires are laid in direct contact with wires in **adjacent** layers, Hertz contact stresses produce wire failures leading to ultimate cable failure at tensions well below the static breaking strength. The proposed model treats crosswire Hertz contact stresses as equivalent geometric notches in conjunction with the numerical solution of the governing helical wire cable equations. Model

and physical **test** results show good agreement.
CT CABLE SHEATHING; FATIGUE; OPTICAL CABLES; POWER CABLES; STRESS EFFECTS; **TELECOMMUNICATION CABLES**
ST cable sheathing; fatigue model; armored cables; cycles-to-failure; axial tension; **communication cables**; power cables; structural strength; Hertz contact stresses; wire failures; geometric notches; helical wire cable equations
AN 1988:3196471 INSPEC DN B88050453
TI Tension fatigue model for helically armored cables.
AU Knapp, R.H. (Dept. of Mech. Eng., Hawaii Univ., Honolulu, HI, USA); Chiu, E.Y.C.
SO Transactions of the ASME. Journal of Energy Resources Technology (March 1988) vol.110, no.1, p.12-18. 17 refs.
CODEN: JERTD2 ISSN: 0195-0738
DT Journal
TC Theoretical
CY United States
LA English
AB A fatigue model which **predicts** cycles-to-failure for helically armored cables subjected to fluctuating axial tension is proposed. Electrical-optical **communication cables,** power cables, and bridge and track stands normally derive structural strength from two or more layers of round steel wires contrahelically laid around a cylindrical core. In cases where wires are laid in direct contact with wires in **adjacent** layers, Hertz contact stresses produce wire failures leading to ultimate cable failure at tensions well below the static breaking strength. The proposed model treats crosswire Hertz contact stresses as equivalent geometric notches in conjunction with the numerical solution of the governing helical wire cable equations. Model and physical **test** results show good agreement.
CC B2160 Wires and cables; B6240 Transmission line links and equipment; B6260 Optical links and equipment; B8130B Power cables; B8130H Supports, insulators and connectors
CT CABLE SHEATHING; FATIGUE; OPTICAL CABLES; POWER CABLES; STRESS EFFECTS; **TELECOMMUNICATION CABLES**
ST cable sheathing; fatigue model; armored cables; cycles-to-failure; axial tension; **communication cables**; power cables; structural strength; Hertz contact stresses; wire failures; geometric notches; helical wire cable equations

L13 ANSWER 3 OF 8 INSPEC COPYRIGHT 2002 IEE
AB Crosstalk theory is applied to the **prediction** of error rates in digital line systems due to analog telephony signaling events on **adjacent** pairs in the same cable. **Measurements** of the margin against impulsive noise at a given probability of error have been performed, and these show reasonable agreement with **predictions** based on crosstalk theory. For a simple switching event, the regenerator NEXT impulsive noise figure for the near-end crosstalk path is defined. **Measurements** of the mean and variance of near-end crosstalk attenuation are then used to calculate the maximum exchange section loss (from central office to first line regenerator) which satisfies a suggested error performance criterion.
CT CROSSTALK; DIGITAL COMMUNICATION SYSTEMS; ERROR STATISTICS; **TELEPHONE LINES**
AN 1985:2464746 INSPEC DN B85036895
TI Statistics of impulsive noise crosstalk in digital line systems on multipair cable.
AU Potter, P.G.; Smith, B.M. (Telecom Australia Res. Labs., Melbourne, Vic., Australia)
SO IEEE Transactions on Communications (March 1985) vol.COM-33, no.3, p.259-70. 11 refs.
Price: CCCC 0090-6778/85/0300-0259$01.00

CODEN: IECMBT ISSN: 0090-6778
DT Journal
TC Theoretical
CY United States
LA English
AB Crosstalk theory is applied to the **prediction** of error rates in digital line systems due to analog telephony signaling events on **adjacent** pairs in the same cable. **Measurements** of the margin against impulsive noise at a given probability of error have been performed, and these show reasonable agreement with **predictions** based on crosstalk theory. For a simple switching event, the regenerator NEXT impulsive noise figure for the near-end crosstalk path is defined. **Measurements** of the mean and variance of near-end crosstalk attenuation are then used to calculate the maximum exchange section loss (from central office to first line regenerator) which satisfies a suggested error performance criterion.
CC B6210D Telephony; B6240Z Other transmission line links
CT CROSSTALK; DIGITAL COMMUNICATION SYSTEMS; ERROR STATISTICS; **TELEPHONE LINES**
ST impulsive noise crosstalk; digital line systems; multipair cable; error rates; analog telephony signaling events; regenerator NEXT impulsive noise figure; near-end crosstalk path; attenuation; maximum exchange section loss

L13 ANSWER 4 OF 8 INSPEC COPYRIGHT 2002 IEE
TI Determination of harmonic interference voltages induced in paired-**cable communications** circuits by harmonic currents in **adjacent** power lines.
AB Magnetic field patterns under typical configurations of distribution lines due to harmonic currents are analyzed. Laboratory **measurements** of differential voltages induced in a section of twisted-pair **telephone cable** in the presence of known magnetic fields at harmonic frequencies are reported. These data are used to **predict** induced voltages in communications circuits as functions of harmonic current and distances over which the power and **communications cables** run parallel. Such results permit much closer estimates of the likelihood of harmful interference for specific circuit configurations than use of the Telephone Influence Factor method.
ST magnetic field patterns; harmonic interference voltages; **paired-cable communications circuits**; harmonic currents; **adjacent power lines**; distribution lines; **measurements**; differential voltages; **twisted-pair telephone cable**; magnetic fields at harmonic frequencies; induced voltages in communications circuits; **communications cables**; interference
AN 1983:2112251 INSPEC DN B83052311
TI Determination of harmonic interference voltages induced in paired-**cable communications** circuits by harmonic currents in **adjacent** power lines.
AU Orr, J.A.; Emanuel, A.E. (Worcester Polytech. Inst., Worcester, MA, USA); Pileggi, D.J.; Levitsky, F.J.
SO IEEE Transactions on Power Apparatus and Systems (July 1983) vol.PAS-102, no.7, p.2278-83. 7 refs.
Price: CCCC 0018-9510/83/0700-2278$01.00
CODEN: IEPSA9 ISSN: 0018-9510
DT Journal
TC Experimental
CY United States
LA English
AB Magnetic field patterns under typical configurations of distribution lines due to harmonic currents are analyzed. Laboratory **measurements** of differential voltages induced in a section of twisted-pair

telephone cable in the presence of known magnetic fields at harmonic frequencies are reported. These data are used to **predict** induced voltages in communications circuits as functions of harmonic current and distances over which the power and **communications cables** run parallel. Such results permit much closer estimates of the likelihood of harmful interference for specific circuit configurations than use of the Telephone Influence Factor method.

CC B5230 Electromagnetic compatibility and interference; B6240 Transmission line links and equipment; B8130F Overhead lines

CT COMMUNICATION OVERHEAD LINES; ELECTROMAGNETIC INTERFERENCE; HARMONICS; POWER OVERHEAD LINES

ST magnetic field patterns; harmonic interference voltages; **paired-cable communications circuits**; harmonic currents; **adjacent power lines**; distribution lines; **measurements**; differential voltages; **twisted-pair telephone cable**; magnetic fields at harmonic frequencies; induced voltages in communications circuits; **communications cables**; interference

L13 ANSWER 5 OF 8 INSPEC COPYRIGHT 2002 IEE

AB Presents a distributed algorithm for implementing alpha - beta search on a tree of processors. Each processor is an independent computer with its own memory and is connected by **communication lines** to each of its nearest **neighbours**. **Measurements** of the algorithm's performance on the Arachne distributed operating system are presented. A theoretical model is developed that **predicts** at least order of k/sup 1/2/ speedup with k processors.

AN 1983:1980911 INSPEC DN C83003862

TI Parallelism in alpha-beta search.

AU Finkel, R.A. (Computer Sci. Dept., Univ. of Wisconsin, Madison, WI, USA); Fishburn, J.P.

SO Artificial Intelligence (Sept. 1982) vol.19, no.1, p.89-106. 7 refs. CODEN: AINTBB ISSN: 0004-3702

DT Journal

TC Practical

CY Netherlands

LA English

AB Presents a distributed algorithm for implementing alpha - beta search on a tree of processors. Each processor is an independent computer with its own memory and is connected by **communication lines** to each of its nearest **neighbours**. **Measurements** of the algorithm's performance on the Arachne distributed operating system are presented. A theoretical model is developed that **predicts** at least order of k/sup 1/2/ speedup with k processors.

CC C1230 Artificial intelligence

CT ARTIFICIAL INTELLIGENCE; DISTRIBUTED PROCESSING

ST parallelism; alpha-beta search; distributed algorithm; tree of processors; Arachne distributed operating system

L13 ANSWER 6 OF 8 INSPEC COPYRIGHT 2002 IEE

AB Presents a distributed algorithm for implementing alpha -B search on a tree of processors. Each processor is an independent computer with its own memory and is connected by **communication lines** to each of its nearest **neighbors**. **Measurements** of the algorithm's performance on the Arachne distributed operating system are presented. A theoretical model is developed that **predicts** speedup with arbitrarily many processors.

AN 1981:1657207 INSPEC DN C81010274

TI Parallel alpha-beta search on Arachne.

AU Fishburn, J.P.; Finkel, R.A.; Lawless, S.A. (Dept. of Computer Sci., Univ. of Wisconsin, Madison, WI, USA)

SO Proceedings of the 1980 International Conference on Parallel Processing

New York, NY, USA: IEEE, 1980. p.235-43 of x+349 pp. 7 refs.
Conference: Columbus, OH, USA, 26-29 Aug 1980
Sponsor(s): Ohio State Univ.; IEEE; ACM
DT Conference Article
TC Practical; Theoretical
CY United States
LA English
AB Presents a distributed algorithm for implementing alpha -B search on a tree of processors. Each processor is an independent computer with its own memory and is connected by **communication lines** to each of its nearest **neighbors**. **Measurements** of the algorithm's performance on the Arachne distributed operating system are presented. A theoretical model is developed that **predicts** speedup with arbitrarily many processors.
CC C1230 Artificial intelligence; C5600 Data communication equipment and techniques
CT ARTIFICIAL INTELLIGENCE; DISTRIBUTED PROCESSING
ST alpha-beta search; Arachne; distributed algorithm; alpha-B search; tree of processors; distributed operating system

L13 ANSWER 7 OF 8 INSPEC COPYRIGHT 2002 IEE
TI Using noise **measurements** to define conditions causing inductive interference.
AB A set of longitudinal and metallic **measurements** at rural telephone stations is used with a relatively simple model to calculate cable and termination admittance unbalances, average inducing current and approximate harmonic levels. These factors quantify major causes of interference due to power line **proximity** to **communications lines**. All results have been verified except cable admittance, which is close to expected values. Perturbations of the model are used to **predict** the effects of general mitigation.
CT ELECTRIC NOISE **MEASUREMENT**; TELEPHONE INTERFERENCE; **TELEPHONE LINES**
ST **noise measurements**; inductive interference; rural telephone stations; model; harmonic levels; **power line proximity**; **communications lines**; cable admittance; admittance unbalance
AN 1977:1040615 INSPEC DN B77017915
TI Using noise **measurements** to define conditions causing inductive interference.
AU Guzik, S.W.; Knowles, A.K. (Bell-Northern Res., Ottawa, Ont., Canada)
SO 1976 National Telecommunications Conference. I
New York, NY, USA: IEEE, 1976. p.12.5/1-5 of xxix+432 pp. 0 refs.
Conference: Dallas, TX, USA, 29 Nov-1 Dec 1976
Sponsor(s): IEEE; et al
DT Conference Article
TC Application; Experimental
CY United States
LA English
AB A set of longitudinal and metallic **measurements** at rural telephone stations is used with a relatively simple model to calculate cable and termination admittance unbalances, average inducing current and approximate harmonic levels. These factors quantify major causes of interference due to power line **proximity** to **communications lines**. All results have been verified except cable admittance, which is close to expected values. Perturbations of the model are used to **predict** the effects of general mitigation.
CC B5230 Electromagnetic compatibility and interference; B6220C Telephone stations
CT ELECTRIC NOISE **MEASUREMENT**; TELEPHONE INTERFERENCE; **TELEPHONE LINES**

ST   **noise measurements**; inductive interference; rural telephone
      stations; model; harmonic levels; **power line proximity**;
      communications lines; cable admittance; admittance unbalance

L13   ANSWER 8 OF 8 INSPEC COPYRIGHT 2002 IEE
TI   Behavior of crosstalk loss for **adjacent** pairs at low
      frequencies.
AB   **Measurements** at the Northern Electric cable plant in Lachine and
      elsewhere show that at low frequencies near-end crosstalk loss (NEXT) and
      far-end crosstalk loss (FEXT) for **adjacent** pairs do not have
      slopes of 15 dB/decade and 20 dB/decade, respectively. In this paper an
      approximation **predicts** a slope of 5 dB/decade for NEXT and long
      cable and 10 dB/decade for FEXT.
CT   CROSSTALK; **TELECOMMUNICATION CABLES**
ST   crosstalk loss; **adjacent pairs**; low frequencies; Northern
      Electric cable plant; near end; far end; **telecommunication cables**
AN   1975:828104 INSPEC   DN B75042848
TI   Behavior of crosstalk loss for **adjacent** pairs at low
      frequencies.
AU   Bing Han, S. (Bell-Northern Res., Ottawa, Ont., Canada)
SO   IEEE Transactions on Communications (Sept. 1975) vol.COM-23, no.9,
      p.956-62. 7 refs.
      CODEN: IECMBT ISSN: 0090-6778
DT   Journal
TC   Theoretical
CY   United States
LA   English
AB   **Measurements** at the Northern Electric cable plant in Lachine and
      elsewhere show that at low frequencies near-end crosstalk loss (NEXT) and
      far-end crosstalk loss (FEXT) for **adjacent** pairs do not have
      slopes of 15 dB/decade and 20 dB/decade, respectively. In this paper an
      approximation **predicts** a slope of 5 dB/decade for NEXT and long
      cable and 10 dB/decade for FEXT.
CC   B6240 Transmission line links and equipment
CT   CROSSTALK; **TELECOMMUNICATION CABLES**
ST   crosstalk loss; **adjacent pairs**; low frequencies; Northern
      Electric cable plant; near end; far end; **telecommunication cables**
ET   B

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=> d his full

     (FILE 'HOME' ENTERED AT 09:02:11 ON 26 NOV 2002)

     FILE 'INSPEC' ENTERED AT 09:02:17 ON 26 NOV 2002
L1       658723 SEA ABB=ON  PLU=ON  ASSUM? OR PREDICT?
L2        89077 SEA ABB=ON  PLU=ON  ADJCENT OR NEIGHB? OR PROX?
L3       125196 SEA ABB=ON  PLU=ON  ADJACENT OR NEIGHB? OR PROX?
L4      1890529 SEA ABB=ON  PLU=ON  TEST? OR MEASUR?
L5       667779 SEA ABB=ON  PLU=ON  LINE# OR LOOP# OR CABLE#
L6       195534 SEA ABB=ON  PLU=ON  L4 AND L5
L7        20248 SEA ABB=ON  PLU=ON  L6 AND L1
L8            0 SEA ABB=ON  PLU=ON  L7 AND LL3
L9          533 SEA ABB=ON  PLU=ON  L7 AND L3
L10       11515 SEA ABB=ON  PLU=ON  (TELEPHONE OR PHONE OR TELECOMMUNICATION#
                OR COMMUNICATION#) (A) (LINE# OR LOOP# OR CABLE#)
L11        2770 SEA ABB=ON  PLU=ON  L4 AND L10
L12         162 SEA ABB=ON  PLU=ON  L11 AND L1
L13           8 SEA ABB=ON  PLU=ON  L12 AND L3
                D HIT ALL 1-8
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